

## **SECTION C**

### **DESCRIPTION/SPECIFICATIONS/AND WORK STATEMENT**

1. **BACKGROUND**

The National Park Service produces maps for use by visitors to all areas of the National Park System. They are produced digitally for use in various media. Boundary information, access routes, developed areas, trails, parking locations, cultural and historic resource sites, natural history resource locations, as well as adjacent lands are included in their content. Many maps use shaded-relief as background information. Their presentation and appearance is such that as a body of work, they become a visual series. Maps in site specific brochures have similar tones, consistent typefaces, and standard line weight treatments for like-subject items. So, too, do maps produced for use on outdoor wayside panels and indoor exhibits. The difference for these maps is site specific information. The information may be educational, orientational, or thematic and culturally focused.

2. **PURPOSE**

The purpose of the contract is to design and produce accurate, visually appealing, cartographic presentations that safely direct visitors around the park in a manner that preserves the resource yet showcases the park's unique characteristics. Production techniques are also standardized to make revision work efficient. Since these maps are public domain materials, other National Park Service offices, other government agencies, and the general public must be confident that the information is both cartographically and culturally accurate.

3. **SCOPE OF WORK**

Independently, and not as an agent of the Government, the Contractor shall furnish all labor, materials, facilities and miscellaneous services necessary to provide the National Park Service with digitally produced map compilations, map corrections, dot-generated film negatives and map proofs which contain dot-density test strips and visual registration marks. The maps shall be produced for use in publications, interior or exterior exhibits, and multimedia displays.

National Park Service mapping requires digital map production methods.

All digital work shall be developed and accessible on Macintosh System 8.0, or higher using Adobe Illustrator 8.0, or higher, Photoshop 5.0, or higher, and MAPublisher 4.0 or higher. Software upgrades will be required over the course of the contract. Programs and/or upgrades will be specified in individual Task Orders.

The majority of the work to be produced will be in various sizes up to 36" x 24". A small number will be larger formats up to 36" x 48".

National Park Service requirements include a wide range of services from preliminary cartographic compilation phases to complete mapping services or any aspect between and are described as follows:

A. **Map Compilation (Digital)**

The Contractor shall have access to accurate digital data with capacity to import via the internet from ArcView, ArcInfo, AutoCAD, Digital Chart of the World (DCW), Digital Line Graph (DLG), Digital Elevation Model (DEM), Digital Orthophoto Quadrangles (DOQ), Digital Raster Graphics (DRG), and the U.S. Geological Survey Digital National Atlas. The Contractor shall identify other available sources as required.

When required to access data, the Contractor shall first determine if that information is available from a National Park Service source, a U.S. Geological Survey source, or other non-proprietary source. Data, once compiled, edited, and approved for the National Park Service projects must be unencumbered by one-time use fees, copyrights, or other licensing agreements.

On occasion, the Contractor shall travel to a park site. The objective will be to define the conceptual approach to the map(s), then select and verify the information that will contribute to the compilation, and the final map(s). Any travel required will be specified in individual Task Orders.

Compilation data shall comprise line and area fill, be layered by content or National Park Service specification, and include any additional geographic, political, typographic, or cultural data specified in individual Task Orders.

B. **Map Files And Map Correction (Digital)**

From approved or Government-Furnished compilations, digital data, and/or specifications, the Contractor shall provide cartographic services to make new-map digital files, corrections to existing digital files, adjustments to existing digital files for other uses and sizes, and/or provide dot-generated, image setter, services for film negatives suitable for proofing in process and/or spot-colors as specified in individual Task Orders.

The Contractor shall provide high-resolution digital proofs, or film-based photomechanical proofs as specified in individual Task Orders.

Some final map files shall require the inclusion of traps and overprints depending on the production method specified in individual Task Orders.

National Park Service map standards vary based on final use and will either be referenced or furnished in individual Task Orders. Digital cartographic techniques and services shall include, but are not limited to:

- (1) Linework derived from digital data sources and generalized to specifications provided by the Contracting Officer's Technical Representative (COTR). Curved lines drawn in the Adobe Illustrator program shall be created using Bezier Curves.
- (2) Separate layers created for each category of polygons, area fill separation, or as specified in individual Task Orders. Polygons shall be created using duplicated linework from the developing file.
- (3) Typefont specification is limited and specific to insure graphic consistency from one map to the next and with other elements that may comprise the brochure or exhibit panel. The Contractor shall use Adobe Type Library Helvetica Neue 2 55 (Roman), 56 (Italic), 75 (Bold), 76 (Bold Italic); Helvetica Neue 1 95 (Black), 96 (Black Italic); Helvetica Neue 3 45 (Light), 46 (Light Italic), 65 (Medium), and 66 (Medium Italic). The Contractor shall also use from the Adobe Type Library, Frutiger Light, Light Italic, Roman, Roman Italic, Bold, Bold Italic, Black, Black Italic, and Ultra Black. The preferred type will be specified in individual Task Orders. Additional fonts may be specified in individual Task Orders.
- (4) Typography placement on multiple layers as defined by the National Park Service. Type positioning shall be guided by legibility, layout, and shall be a result of consultation with National Park Service cartographers or the designated COTR specified in the individual Task Order.
- (5) Color build specifications ranging from 3 to 100 percent increments at 80 to 175 lines-per-inch. This information will be specified in individual Task Orders.
- (6) Corrections and/or changes added to the existing layer for that category. New layers shall be created for new categories.
- (7) Scanning service, input at a minimum of 300 dot-per-inch, rasterized, continuous tone shaded-relief artwork, traditional art, textures, special effects, symbols, or other base items. If a map is to be enlarged greater than 125 percent of the original size, the Contractor shall scan original components like shaded-relief, artwork, or other continuous tone content at the new map(s) required size to retain graphic integrity of the original. Output line-per-inch requirements may vary and the minimum/maximum dot densities will be specified in individual Task Orders. Should a project require the scanning of line data, it shall be done at 1200 dot-per-inch resolution.

- (8) Film and proof of the completed and approved map corresponding exactly to the content of the electronic file. Data shall be transferred via Macintosh-formatted ZIP, CD, DVD, JAZ, disks or Internet. Additional transfer methods may be specified in individual Task Orders.
- (9) File structure determined by the final reproduction method which may be for offset printing in four or more colors, for screen printing, porcelain enamel, or digital output. Final reproduction method will be defined in individual Task Orders.

C. **Dot-Generated Film Negatives**

The Contractor shall provide dot-generated film suitable for creating color proofs. Dot generated final films for proofing shall be consistent in film weight at .004 or .007 inch, or shall match existing films for correction work. Output shall be at a minimum of 2400 dots-per-inch. Films from which the proof was made shall be provided to the COTR with the proof.

To effectively measure dot density of generated films, each final film shall include an image setter calibration color and gray scales test-strip in the margin.

The Contractor shall provide densitometer readings of all film and record them on the films. They must fall within the industry tolerances of +/- 2 percent.

On occasion, a 5th or 6th negative may be needed in conjunction with the process-color negatives. Some projects may require output for up to eight colors. Visual registration marks shall be in each film.

D. **Mapping proofs**

From dot-generated films and/or digital files, the Contractor shall provide proofing services to make map proofs as specified in individual Task Orders. On occasion, five to eight colors may be required. These proofs will be reviewed and approved by the COTR.

Proof systems required will be specified from the following:

- (1) Photomechanical matte-finish color proofs, Waterproof- or Matchprint-like;

- (2) Color-key-like proofs; and
- (3) Digitally generated direct one-piece proof capable of showing specified overprinting colors; as an example--area colors over shaded-relief. (ink-jet, electrostatic, Rainbow-, Cactus-, or Iris-like).

The Contractor shall provide densitometer readings of all proofs and record them on the proofs. They must fall within the industry tolerance of +/- 2 percent

All proofs shall be provided by the Contractor in the final map size. Proofs of portions of the final product showing specified colors shall be provided to the COTR when required in the Task Order. Not all large format maps require film output. The Task Order will specify when these are required.

#### 4. **ADVANCE UNDERSTANDING**

The National Park Service retains ownership of the compilation data, and all digital components used to generate map proofs, all production-ready files and/or press-ready composite films.

#### 5. **PERFORMANCE**

All work to be performed under this contract, will be directed by the Government through the issuance of individual Task Orders in accordance with the procedures outlined in Section G. In no event will the Government be responsible for any work performed by the Contractor that was not undertaken pursuant to a duly executed Task Order signed by the Contracting Officer.